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ABSTRACT

A team of evaluators assessed the implementation of the Career Education Incentive Act in Tennessee during the period from the fall of 1979 through January 1981. Using a series of standardized reporting forms as well as telephone and personal interviews with local project directors, evaluators collected data pertaining to 20 local projects carried out in 1979-80 and 17 local projects conducted in 1980-81. They found that a majority of the 1980-81 local career education projects accomplished most of the objectives specified in Tennessee's state plan for career education. Included among the accomplishments were the following: conduct of needs assessments to formulate local project objectives, purchase of instructional and career guidance materials, development of plans to reduce bias/stereotyping, establishment of resource centers and advisory councils, and collaboration with community organizations. Only in the areas of advisory council meetings and staff awareness sessions did achievement of criterion-referenced objectives fall short of predicted levels. Factors associated with project success and failure were isolated. Among factors contributing to project failure were absence of a project director, failure to conduct needs assessments and evaluations, and insufficient funding. Factors linked to project success included staff development activities, community participation, and early commitment of local funds. (MN)

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AN EVALUATOR'S PERSPECTIVE

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Implementation of the Career Education Incentive Act in Tennessee:  
An Evaluator's Perspective

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Introduction

Implementation of the State Plan for Career Education in Tennessee according to provisions of the Career Education Incentive Act (PL 95-207) began in Fall 1979. During the school years 1979-80 and 1980-81, before massive budget cuts forced the elimination of funding for an evaluation component, personnel in the Bureau of Educational Research and Service at the University of Tennessee, Knoxville worked under contracts with the Tennessee Department of Education and local school systems to evaluate the implementation process.

During the first project year the evaluators contracted with the State Coordinator for Career Education to provide formative evaluation of her state-wide leadership activities, including:

- 1) administration/coordination procedures
- 2) work with the State Advisory Council, and
- 3) conduct of state and regional meetings, i.e.:
  - a) three technical assistance workshops;
  - b) a state-wide workshop on bias/stereotyping in career education;
  - c) three workshops for counselors; and
  - d) a state-wide conference for educators, employers, and representatives of public and private community agencies.

In providing leadership and coordination for career education activities in Tennessee during 1979-80 the State Coordinator attained all except two of her stated objectives. By the end of the project year a listing of consultants for local education agencies had not been completed, but this list was finalized in January 1981. While preliminary contacts had been made, representatives of teacher preparation institutions in the State had not been brought together to discuss the implications of career education for their programs.

During the second project year, 1980-81, the evaluators entered into contracts with individual school systems for evaluation of local projects, which received 85 percent of State funds provided under the terms of the Career Education Incentive Act. Methodology for evaluation of local projects was designed to permit generalizations across projects and thus provide a state-wide evaluation of the career education program in Tennessee.

Descriptive Information Concerning Local Projects

Early in the first project year the evaluators developed a series of standard reporting forms for directors of local projects. Periodic written reports, telephone contacts and personal interviews with local directors over two years provided the information for both formative and summative evaluation of the several projects. These data collection procedures provided the following descriptive information about the 20 local projects conducted in 1979-80 and the 17 local projects carried out in 1980-81:

- .More than 2000 educators in Tennessee received career education training through the local projects financed in part with Career Education Incentive Act funds.
- .Teachers in local projects reported that they had conducted infusion activities in more than 5000 classrooms during the two project years. If each classroom contained at least 25 students, some 125,000 students received instruction in career education as a result of PL 95-207 in Tennessee.
- .More than 100 career resource centers were established in Tennessee with Incentive Act funds. At the end of the second year project directors reported that approximately 60 percent of the teachers involved in their programs had visited one of the centers, and that three-fourths of the students taught by these teachers had used materials from the centers.
- .Almost 1300 students were provided work experiences for the purpose of career exploration through the local projects.

Many of the objectives specified in Tennessee's State Plan for Career Education pertained to the achievements of local projects. These objectives were stated in measurable terms, i.e., so that the percentage of local projects achieving each could be determined. Criteria were established which specified that the percentage of projects attaining the objective would increase each year. A comparison of the criterion level and percentage of projects achieving each objective during the second project year (1980-81) is shown in Table 1.

As the data in Table 1 illustrate, a majority of the 1980-81 local career education projects accomplished the following:

- .conducted a needs assessment to assist in formulation of objectives for the local project (88% of the projects).
- .purchased instructional and career guidance materials (88%) and instructed users in appropriate methods of delivery (71%).
- .conducted inservice training in career education concepts and infusion techniques (88%).
- .included in their plans attempts to reduce bias/stereotyping (71%).
- .set up a career resource center to serve both students and the public (64%).
- .established an advisory council (88%) which met at least once (71%).
- .identified and used an evaluation instrument (88%).
- .implemented collaborative activities with community organizations (76%).
- .adopted a statement concerning career education as part of school board goals/policies (71%).

TABLE 1

ACCOMPLISHMENT OF STATE COORDINATOR'S CRITERION-BASED PROJECT-REFERENCED OBJECTIVES

Objectives	Subgoal	Percent of Projects																					
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Project plans include emphasis on reducing bias/stereotyping	A4 <sub>2</sub>	----->																					
Evidence that at least 3 activities were carried out to reduce bias/stereotyping	A4 <sub>2</sub>	----->																					
Provided inservice in career education concepts, infusion techniques	B1 <sub>1</sub>	----->																					
School board has adopted career education as a goal or as the subject of a policy statement	C1 <sub>2</sub>	----->																					
Conducted a local needs assessment and identified objectives to meet these needs	C2 <sub>1</sub>	----->																					
Established an Advisory Council	C2 <sub>3</sub>	----->																					
Developed a curriculum guide in a basic skill area	C2 <sub>4</sub>	----->																					
Established a comprehensive career guidance program	C2 <sub>5</sub>	----->																					
Identified and used an evaluation instrument	C2 <sub>6</sub>	----->																					
Established career resource center(s) to serve students and the public	C2 <sub>7</sub>	----->																					
Implemented collaborative activities with community organizations	C2 <sub>8</sub>	----->																					
Implemented work experiences for the purpose of career exploration	C2 <sub>9</sub>	----->																					
Provided awareness sessions for other staff to enable them to assess bias/stereotyping in materials	C3 <sub>1</sub>	----->																					

(Table 1, continued)

Objectives	Subgoal	Percent of Projects																			
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
Purchased instructional and career guidance materials	C3 <sub>2</sub>	-----> *****																			
Instructed users in appropriate delivery of materials	C3 <sub>2</sub>	-----> *****																			
Reviewed materials to insure that they are bias and stereotype free	C3 <sub>2</sub>	-----> *****																			
Advisory Council has met	C3 <sub>2</sub>	-----> *****																			

Legend

-----> Criterion level  
\*\*\*\*\* Level of Accomplishment

Fewer than half the local projects accomplished the following objectives, but the percentage nevertheless exceeded the criterion set out in the State Plan:

- .developed a curriculum guide in a basic skill area.
- .established a comprehensive career guidance program.
- .provided work experiences for the purpose of career exploration.

In only two areas did achievement of the criterion-referenced objectives fall short of predicted levels. Whereas 75 percent of the local projects should have held at least one meeting of an advisory council during 1980-81, just 71 percent of the projects actually did so. Seventy-one percent of the projects described plans to emphasize reduction of bias/stereotyping when 75 percent should have done this. Only 65 percent of the projects provided awareness sessions for staff to enable them to assess bias/stereotyping in materials; 90 percent were supposed to do this during 1980-81. Finally, although 75 percent of the projects should have carried out at least three activities to reduce bias/stereotyping, only 53 percent did so.

#### Progress Toward Improving Student Achievement of Career Education Outcomes

Early in the first project year the evaluators began to emphasize the need to assess the quality of the career education program being provided for students in Tennessee in terms of (a) meeting identified student needs and (b) improving student achievement of career education objectives. A number of factors combined to make progress toward this end difficult to achieve. First, the objectives as stated in Tennessee's State Plan for Career Education were largely process-oriented, i.e., they could be evaluated simply by asking "Was this done?" without focusing on how well it was done. Second, the evaluators had no opportunity during 1979-80 to suggest to local project directors strategies for measuring student outcomes. Even during 1980-81, when consultants were employed to conduct individual evaluations of 11 of 17 local projects, the evaluators were not contacted until the projects were in their second month of operation. Objectives had been written; budgets had been committed, and in many cases no plans had been made to measure student achievement.

Eight of the 17 local projects funded in 1980-81 provided evidence of having utilized measures of student outcomes. Four used the Career Maturity Inventory. Of the four, two reported that students who had experienced a career education program made significant gains on one or more CMI subscales. Students involved in one project improved their pre-test scores on the Goal Selection and Planning Scales. A second program was successful in improving scores on the Attitude Scale.

The Career Orientation Battery was given to third and fifth graders in one project with the result that third graders involved in career education increased their scores on the Sex Equity scale of the instrument.

In another project students who had been in a career education program for a year achieved higher scores than a comparison group on six scales of the Career Skills Assessment Program instrument prepared by the College Board.

## Comparison of Project Accomplishments in Year 1 and Year 2

Thirteen projects received continuation funding in 1980-81. Fairly complete information was available for 12 of these projects for each of the two years (see Tables 2 and 3). Analysis of the reports prepared by evaluators and project directors suggests a number of generalizations. Some project activities appeared to be more likely to receive emphasis during the initial year, while others took longer to effect and accomplishment was more apparent during the second year.

Project Management. Five projects employed part- or full-time coordinators during the first year and only one additional project, or six altogether, had a coordinator during the second year.

Needs Assessments. All projects for which information was available during the first year (12) conducted needs assessments during that year. Seven conducted needs assessments during the second year.

Three projects included students as sources of information in needs assessments conducted during the first year. While detailed information about needs assessments was available for only seven of the projects during Year 2, six of the seven used students as a primary source of data.

Inservice Participation. The number of educators participating in inservice training related to career education decreased from Year 1 to Year 2. With information available for 12 projects each year, there was an overall decrease of 37 percent.

Infusion. The average number of classrooms in which infusion occurred rose from 118 per project in the first year to 324 during the second year, representing a 175 percent increase.

Purchase of Materials. All projects reporting purchased career education materials during both project years. However, both the number of materials and the average number of materials purchased per project declined during the second year of implementation.

Curriculum Guides. Curriculum guides were developed in five of the projects in 1980-81, whereas only one project developed such materials in 1979-80. As classroom infusion increased (and, presumably, activities were tried in the classrooms) curriculum guides were more likely to be developed.

Bias/Stereotyping Activities. Four projects reported conducting activities to reduce bias or stereotyping during Year 1, while 11 did so during Year 2.

Work Experience. While the number of projects reporting that work experiences had been provided for students for the purpose of career exploration decreased from seven the first year to six, the average number of students served per project increased from 38 to 129.

Generation of Funds. During Year 1 only one project indicated that funds had been received from a source other than federal or local government. During Year 2 three projects utilized outside funds, with a combined total of \$101,657.50. This finding was based on information from seven of the projects for the second year. The one project which obtained outside funding during the first year showed receipt of \$800 from community resources. The project did not supply information for the second year, so it cannot be determined whether that project maintained, increased, or decreased the amount of external funds received.

Publicity. Much greater public exposure accompanied the second year of funding. There was a 23 percent increase in the number of newspaper articles that were submitted to publicize career education in the second year. More projects submitted magazine articles. Radio and television presentations by personnel connected with several projects were made for the first time during the second year of funding. A total of 161 publicity efforts (including

TABLE 2\*

Comparison of First and Second Year  
Project Activities

Activity	1979-80		1980-81	
	Number of Projects	Number of Projects Reporting	Number of Projects	Number of Projects Reporting
Employed part- or full-time career education coordinator	5	12	6	12
Established an advisory council	12	12	12	12
Conducted needs assessment current year	12	12	7	12
Needs assessment included students	3	11	4	7
Conducted needs assessment prior to current year	6	12	12	12
School board has adopted career education as a goal or subject of a policy statement	10	12	10	12
Has a system-wide plan for career education	11	12	12	12
Established career resource centers	11	12	11	12
Purchased career education materials	13	13	12	12
Provided work experiences for career exploration	7	12	6	12
Conducted evaluation	12	12	12	12
Included teachers in evaluation	11	12	11	12
Included students in evaluation	6	12	6	12

\*Table 2 represents the numbers of projects reporting that they either had or had not conducted certain activities. The figures in Table 3 are based on more specific information from follow-up questions which not all projects supplied.

Table 3 \*

Comparison of First and Second Year  
Project Activity Averages

1979-80

1980-81

Activity	Number	Projects Represented	Average	Number	Projects Represented	Average	Change in Average
Career Resource centers established and maintained	76	11	6.9	78	10	7.8	+ .9
Career education materials purchased	6058	11	551	5060	11	460	-91
Students participating in work experiences for career exploration	151	4	38	771	6	129	+91
Activities to reduce bias/stereotyping	NR	4		50	11	4.5	
Developed curriculum guides	NR	1		23	5	4.6	
Classrooms in which career education was infused	1063	9	118	3240	10	324 <sup>a</sup>	+206
Educators participating in inservice related to career education	3232	12	269	2044	12	170	-99
External funds obtained	\$800	1	\$800	\$101,657.50	3	\$33,885.83	+33,085.83
Publicity about career education:							
Newspaper articles	99	12	8.25	122	12	10.17	+1.92
Magazine articles	6	3	2	10	4	2.5	+ .5
Radio presentations				14	4	3.5	+3.5
TV presentations				13	3	4.3	+4.3
Presentations at meetings	NR			54	7	7.7	

<sup>a</sup> plus "ALL" in one project, "ALL K-4" in another project.

<sup>b</sup> not recorded in 1979-80

NR = figures not reported

\*Table 2 represents the numbers of projects reporting that they either had or had not conducted certain activities. The figures in Table 3 are based on more specific information from follow-up questions which not all projects supplied.

presentations at meetings) was recorded for the six projects with coordinators for the career education program, while 53 presentations or submissions were made by the six projects that submitted information but did not have a part- or full-time coordinator.

Evaluation. Evaluation reports for local projects revealed an increase in the use of research design and statistical tests during the second project year. Eleven projects utilized teachers as sources of evaluation data both years, while six included students both years. First year project reports noted gains in student information and increases in student self, career, educational, and economic awareness. In the second year the student measures were used in a manner which made it easier to assess project impact on the students, i.e., pre- and post-tests, some with comparison groups, were employed. For Year 2, significant gains on the Attitude, Goal Selection, and Planning scales of the Career Maturity Inventory were reported; behavioral objectives were stated and met in some projects; the career education students scored 40% higher than a comparison group of students on various areas of the Career Skills Assessment Program. While there is still room for improvement in measurement and evaluation of the projects' effects on students, sound evidence was produced during the second year of implementation to show that the projects did have a positive impact on students. The need for assistance to the projects in the area of evaluation was one which became evident during the first year of implementation, and received attention by the State Coordinator. This attention appeared to have resulted in improved evaluation procedures.

To summarize, the first year of project funding was likely to be characterized by:

- . Conducting a needs assessment
- . Surveying groups other than students in the needs assessments
- . Providing inservice training
- . Purchasing of materials
- . Conducting evaluation based on teacher rather than student outcomes.

Second year funding was more likely to produce:

- . Needs assessments in which students were surveyed
- . Fewer projects conducting needs assessments
- . Infusion of career education concepts in a larger number of classrooms
- . Decrease in the number of materials purchased
- . Diminished participation in inservice training
- . Development of more curriculum guides
- . An increase in activities to reduce bias or stereotyping
- . More student participation in exploratory work experiences
- . More revenue from external sources for career education
- . More publicity about career education
- . Evaluation of projects characterized by better measures, better design, and better reporting.

#### Factors Involved in Project Continuation

In the course of analyzing in various ways the experience of local projects for two years, the evaluators determined that there were several factors that mitigated against the survival of projects. These included:

- 1. the absence of a project director
- . failure to conduct a yearly needs assessment
- . failure to conduct an evaluation that included a measure of student outcomes
- . insufficient funding.

Factors that seemed to bode well for continuation, even with little or no external funding, included:

- .employing a full-time project director
- .conducting staff development programs
- .purchasing materials
- .making career education a component of school board policy
- .establishing an advisory council
- .incorporating community participation
- .acquiring early commitment of local funds.